

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS

OCEAN TOMO, LLC,

Plaintiff-Counter Defendant,

v.

JONATHAN BARNEY and
PATENTRATINGS, LLC,

Defendants-Counter Plaintiffs.

No. 12 C 8450

Judge: Joan B. Gottschall

Magistrate: Judge Mary M. Rowland

**PLAINTIFF-COUNTER DEFENDANT'S MEMORANDUM IN SUPPORT OF ITS
MOTION FOR SUMMARY JUDGMENT OF INVALIDITY UNDER 35 U.S.C. § 101**

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Plaintiff-Counter Defendant Ocean Tomo, LLC (“OT”), in support of its Motion for Summary Judgment of Invalidity under 35 U.S.C. § 101, hereby presents its memorandum in support thereof. Defendant-Counter Plaintiff PatentRatings’ (“PR”) U.S. Patent Nos. 6,556,992 (the “’992 Patent”), 7,962,511 (the “’511 Patent”), 7,716,226 (the “’226 Patent”), 8,504,560 (the “’560 Patent”), 7,949,581 (the “’581 Patent”), 7,657,476 (the “’476 Patent”), 8,131,701 (the “’701 Patent”) and 8,818,996 (the “’996 Patent”) (collectively, the “patents-in-suit”) are each invalid under 35 U.S.C. § 101 as they do not claim patentable subject matter. In particular, and under the Supreme Court’s recent holding in *Alice Corp. Pty. Ltd. v. CLS Bank International*, 134 S. Ct. 2347 (2014), the claims of the patents-in-suit are directed to abstract *ideas* that are not entitled to protection under the patent statutes.

INTRODUCTION

This action arises out of a soured business relationship between OT, on the one hand, and PR and Barney, on the other hand. OT, the leading Intellectual Capital Merchant Banc firm, provides, among other things, financial products and services related to expert testimony, valuation, investments, risk management and transactions throughout the United States and overseas. Barney created PR, a company that owns and develops computer-generated metrics that can be used to help determine the quality and relevance of issued United States patents. As detailed below, the algorithm underlying these metrics has been issued a number of patents by the United States Patent and Trademark Office and is used to assess the quality and relative value of patent portfolios.

In approximately 2004, OT and PR entered into a License Agreement pursuant to which, among other things, PR licensed to OT the right to use PR’s patented technology in order to determine the quality and relevance of patents for certain of OT’s clients. As part of the business relationship, Barney became a Member of OT, and OT became a Member of PR. Over the years,

OT has made substantial capital investments and loans for the development of this technology, secured by PR's assets.

Since 2007, however, the parties' business relationship has been plagued by a number of disputes which, following the commencement of three separate lawsuits, the removal of one to this court, and the consolidation of all of those actions under this caption, resulted in the case currently pending before this Court. PR's patented technology is the foundation of the parties' business relationship, and this is reflected in the claims asserted by the parties. Many of the claims specifically invoke the License Agreement under which PR licensed its patented technology to OT, including the various amendments thereto and a related promissory note and security agreement. Specifically, OT seeks a declaration from this Court that it is not currently in breach of these agreements and that they remain in full force and effect. PR, on the other hand, accuses OT of disclosing information in breach of the License Agreement, and also contends that it was fraudulently induced to enter into the 2007 amendment to the License Agreement and the related note and security agreement. The remainder of the parties' claims concern a number of agreements entered into in connection with the License Agreement and violations of other statutory and common-law duties that the parties contend arose as a result of the parties' business relationship. At its core, this relationship revolves around the patents-in-suit. For this reason, in order for there to be either an amicable resolution of this dispute or a full adjudication of the Parties' claims, the validity of the patents-in-suit must be resolved.

In this regard, a series of recent decisions from the U.S. Supreme Court have substantially altered the landscape regarding process patents implemented on computers and raised the bar for patentability. (*See Alice Corp. Pty, Ltd. v. CLS Bank Int'l*, 134 S. Ct. 2354 (2014); *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107 (2013); *Mayo*

Collaborative Series v. Prometheus Labs, Inc., 132 S. Ct. 1289 (2012); and *Bilski v. Kappos*, 130 S. Ct. 3218 (2010)). These decisions have rendered the claimed subject matter of the patents-in-suit ineligible for patent protection under 35 U.S.C. § 101. Each of the claims in the patents-in-suit are directed to fundamental mathematical and statistical tools, such as regression analysis, which are applied to preexisting data collected by a general-purpose computer to determine relationships between the collected and analyzed data. The claims do nothing more than describe the implementation of an abstract idea (i.e., the application of a statistical tool to collected data) on a generic computer. Multivariate regression analysis and probit and logit regression models described in the patents-in-suit have long been used as basic tools in the study of relationships between data.

Under *Alice*, claims directed to such abstract ideas are unpatentable unless they further include elements that individually or collectively transform the idea into something that in practice would be significantly more than a patent on the abstraction itself. 134 S. Ct. at 2358. The asserted claims in the patents-in-suit do not transform the idea. Instead, the claims simply claim the use of well-known statistical algorithms applied to data collected by a general computer. For example, claim 1 of the '560 Patent requires 1) a computer system receiving a first set of information, 2) a computer system identifying an additional document not part of the first set of information that is citationally related to the first set of information, and 3) a computer system that programmatically calculates the degree of citational relationship between data not included in the first information set and at varying degrees of relatedness through the use of regression analysis.

In essence, the '560 Patent is directed to the use of a statistical tool to determine the degree to which documents are related. This is the essence of bibliometrics and statistical modeling.

THE PATENT RATINGS PATENTS-IN-SUIT

PR owns the patents-in-suit that are directed to four basic subject areas. The first subject area is the "Relevance Patents" which include the '226 Patent, the '701 Patent, the '560 Patent and the '996 Patent. The Relevance Patents essentially claim a method for applying well-known fundamental bibliometric and statistical modeling tools to date collected by a general-purpose computer. Representative claims for the Relevance Patents are set forth in Exhibit A.

The second subject area is called the "Ratings Patents" and includes the '992 Patent and the '511 Patent. These patents claim a method for rating patents based on the application of a regression model applied to data ("metrics") extracted from the patents. Representative claims from these patents are set forth in Exhibit B.

The third subject area is the "Valuation Patent," which includes the '476 Patent. The '476 Patent claims a method for placing valuations on patents based on extracting metrics from them and calculating the likelihood that the owners will pay maintenance fees by applying fundamental statistical tools. Representative claims from this patent are set forth in Exhibit C.

The fourth subject area is the "Technology Obsolescence Patent," which includes the '581 Patent. The '581 Patent claims a method for forecasting the rate of obsolescence for a patent based on citations extracted from data objects. Representative claims from this patent are set forth in Exhibit D.

Claim 1 of the '560 Patent is an example of the claims of the Relevance Patents and recites the following:

1. A computer-implemented method, comprising:

receiving, by a computer system, a first set of information identifying an input set of documents, said input set comprising a plurality of documents;

identifying, by the computer system, an additional document that is not a member of the input set, but which is citationally related to at least some of the documents in the input set;

programmatically calculating, by the computer system, a data value that represents a degree to which said document is citationally related to the at least some of the documents in the input set, said data value dependent upon at least (a) how many citational relationships exist at generations higher than a first generation between the input set of documents and said additional document and (b) generation levels of said citational relationships, wherein calculating said data value comprises assigning different amounts of weight to citational relationships of different generation levels, said amounts of weight being based at least in part on a generational citation count determined for each of the different generation levels and an analysis in which multi-generation citational relationships between documents are used to predict existences of first generation citational relationships between documents, said analysis performed over a document population; and

storing the data value in computer storage in association with identifiers of the input set of documents and the additional document.

As can be seen by this exemplary claim, the Relevance Patents claim the counting of citations by a computer to measure the relatedness of documents, which is a fundamental tool of bibliometrics. (Ex. E; Thomas Decl. ¶¶ 88–91, 96.) In addition, the claim requires “programmatically calculating,” which is nothing more than the application of multivariate statistical techniques, notably logit and probit regression, to generate scores for patents based on these metrics. Thus, the PR patents claim the computer implementation of standard statistical techniques to determine the relationship between two sets of data, which is nothing more than a claim to a basic tool of scientific and technological work. (Ex. E; Thomas Decl. ¶¶ 92–93.) As a consequence, the PR claims are directed to an abstract idea that does not amount to patentable subject matter under 35 U.S.C. § 101.

Standard for Summary Judgment

A court shall grant summary judgment if there is no genuine dispute as to any material fact and the moving party is entitled to a judgment as a matter of law. FED. R. CIV. P. 56; *see Celotex Corp. v. Catrett*, 106 S. Ct. 2548, 2552 (1986); *Anderson v. Liberty Lobby, Inc.*, 106 S. Ct. 2505, 2511 (1986). It is well settled that ineligibility under § 101 is a question of law for the court. *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1369 (Fed. Cir. 2011); *In re Comiskey*, 554 F.3d 967, 975 (Fed. Cir. 2009). Consequently, this Court may decide the issue at the summary judgment stage.

The Legal Standards for Patent Eligibility under 35 U.S.C. § 101

Section 101 of the Patent Act defines patentable subject matter, stating that: “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.” 35 U.S.C. § 101. However, the definition of patentable subject matter provided by Section 101 does not encompass everything created by human ingenuity. The Supreme Court has consistently maintained that laws of nature, physical phenomena and abstract ideas are not patentable. *Diamond v. Chakrabarty*, 100 S. Ct. 2204, 2208 (1980); *Diamond v. Diehr*, 101 S. Ct. 1048, 1056 (1981); *Gottschalk v. Benson*, 93 S. Ct. 253, 255 (1972); *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 68 S. Ct. 440, 441 (1948); *Le Roy v. Tatham*, 55 U.S. 156, 175 (1853).

Section 101 further prevents patentees from too broadly claiming a building block of research and development. Building blocks may include basic tools of mathematics or formulas describing preexisting natural relationships. *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S. Ct. 1289, 1296–97 (2012).

Most recently, the Supreme Court reiterated that abstract ideas are not patentable in *Alice Corp. Pty. Ltd. v. CLS Bank International*, 134 S. Ct. 2347, 2355 (2014). In a unanimous decision, the court reaffirmed that laws of nature, natural phenomena and abstract ideas are “the basic tools of scientific and technological work.” *Id.* at 2354. “[M]onopolization of those tools through the grant of a patent might tend to impede innovation more than it would tend to promote it,” thereby thwarting the primary object of the patent laws. *Id.*

Alice, however, went further and clearly applied this rule to computer-implemented ideas. The decision represents a sea change regarding the eligibility of claims involving abstract ideas. Six days after the opinion issued, the USPTO’s Deputy Commissioner for Patent Examination Policy issued a Memorandum to the Patent Examining Corps providing instructions for analyzing claims with abstract ideas following *Alice*. The decision also inspired an uptick in motions brought pursuant to both Rule 56 and Rule 12 for findings of patent invalidity pursuant to Section 101. A number of these motions have already been granted. *See, e.g., In re BRCA1—and BRCA2—Based Hereditary Cancer Test Patent Litigation*, Nos. 2014-1361, 2014-1366, 2014 WL 7156722, at *6–9 (Fed. Cir. Dec. 17, 2014); *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709, 713–17 (Fed. Cir. 2014); *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1352–55 (Fed. Cir. 2014); *Planet Bingo, LLC v. VKGS, LLC*, No. 2013-1663, 576 Fed. Appx. 1005, 1007–9 (Fed. Cir. Aug. 26, 2014); *Enfish, LLC v. Microsoft Corp.*, No. 2:12-cv-07360, 2014 WL 5661456, at *2–13 (C.D. Cal. Nov. 3, 2014); *Bascom Research, LLC v. Facebook, Inc.*, 3-12-cv-06293 (N.D. Cal. Jan. 5, 2015, Order); *Vehicle Intelligence and Safety LLC v. Mercedes-Benz USA, LLC*; No. 13 C 4417, (N.D. Ill. Jan. 29, 2015, Order).

The *Alice* decision confirmed that the courts must evaluate patent eligibility using the two-part test applied in *Mayo*. First, a court should determine whether a challenged claim is

directed to a law of nature, a natural phenomenon or an abstract idea. *Alice*, 134 S. Ct. at 2355. If the answer is yes, then the court considers the claim elements individually and as an ordered combination to determine whether additional elements exist that “transform the nature of the claim” into patent-eligible subject matter. *Id.* The additional elements must amount to an “inventive concept” that is “sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself.” *Id.*; see also *buySAFE, Inc. v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014). Only those claims that pass the second test can be deemed patent eligible. Each of the above considerations is a question of law that can be resolved by the Court on summary judgment. *Enfish*, 2014 WL 5661456, at *1.

In *Alice*, the claims of the patent were directed to a “computer-implemented scheme for mitigating ‘settlement risk’ (i.e., the risk that only one party to a financial transaction will pay what it owes) by using a third-party intermediary.” *Alice*, 134 S. Ct. at 2351–52. Initially, the Court determined that the claims were directed to an abstract idea because they sought to cover intermediated settlement, a fundamental economic practice long prevalent in our system of commerce. *Id.* at 2357. Second, the Court found that the claim elements requiring “generic computer implementation” failed to transform the abstract idea of intermediated settlement into a patent-eligible invention. The additional elements were “[p]urely conventional” and amounted to “electronic recordkeeping—one of the most basic functions of a computer.” *Id.* at 2358–59.

It is important to note that in carrying out the first part of the two-part test, the Court should determine the purpose of the claim by determining what the claimed invention is trying to achieve and whether that purpose is abstract. For example, in *Alice*, the Court determined that the claims were directed to mitigating settlement risk using a third party, even though the claims recited more. Despite these additional elements, the claims were designed to achieve the purpose

of mitigating settlement risk. The Supreme Court took a similar approach in *Bilski* and *Mayo* by characterizing the claims in terms of the inventions’ purposes: hedging risk and applying a natural law, respectively. *Bilski*, 130 S.Ct at 3230; *Mayo*, 132 S. Ct. at 1296–97.

Once the purpose of the claims have been determined, a court must determine whether the claim is abstract. Recent decisions have suggested that long-standing, fundamental practices may be abstract. For example, in *Bilski*, the Supreme Court found unpatentable a claim addressed to hedging risk, a fundamental economic practice long in use. 130 S.Ct at 3230. Similarly, in *Alice*, the Supreme Court found a claim directed to a computerized method of intermediate settlement unpatentable because it was a long-standing concept. *Alice*, 134 S. Ct. at 2356 (noting that intermediated settlement is a fundamental economic concept and a building block of the economy).

ARGUMENT

I. The Patent Ratings Claims Are Directed to Abstract Ideas

A. Fundamental Practices and Concepts Capable of Mental Formulation or Performance Are Abstract Ideas

The Supreme Court in *Alice* did not “delimit the precise contours of the ‘abstract ideas’ category.” 134 S. Ct. at 2357. However, the Court did rely on earlier precedents to confirm that the claims were directed to an abstract idea. *See, e.g., id.* at 2356–57. *Alice* and other Supreme Court cases and Federal Circuit cases teach two principal themes that can be applied to determine whether an abstract idea is claimed.

One theme present in these cases is that patent claims to processes or functions that are required to be performed by a conventional computer are impermissibly abstract if the claims could also be performed in the human mind or with pen and paper. *See, e.g., Planet Bingo, LLC v. VKGS LLC*, 576 Fed. App’x 1005, 1008–09 (Fed. Cir. 2014) (claim for “selecting, storing, and

retrieving two sets of numbers” could be done mentally and thus was drawn to patent-ineligible subject matter); *CyberSource*, 654 F.3d at 1371 (“[M]ethods which can be performed mentally, or which are the equivalent of human mental work, are unpatentable abstract ideas—the ‘basic tools of scientific and technologic work’ that are open to all.”); *In re Comiskey*, 554 F.3d 967, 980 (Fed. Cir. 2009); *DietGoal Innovations LLC v. Bravo Media LLC*, No. 13 Civ. 8391 (PAE), 2014 WL 3582914, at *10 (S.D.N.Y. July 8, 2014).

In *Gottschalk v. Benson*, 93 S. Ct. 253 (1972), the Court invalidated a claim to a method of programming a general-purpose computer to convert binary-coded decimal numbers (“BCD”) into pure binary numbers through the use of a mathematical algorithm. The Court relied on the mental character of the claim:

The conversion of BCD numerals to pure binary numerals can be done mentally The method sought to be patented varies the ordinary arithmetic steps a human would use by changing the order of the steps, changing the symbolism for writing the multiplier used in some step, and by taking subtotals after each successive operation. The mathematical procedures can be carried out in existing computers long in use, no new machinery being necessary. And, as noted, they can also be performed without a computer.

Id. at 255. The Supreme Court extended its *Benson* holding in *Parker v. Flook*, 98 S. Ct. 2522, 2523–24 (1978), where the patent claimed a method for calculating and updating values of “alarm limits” for process variables like temperature in catalytic conversion. In holding the claim to be unpatentably abstract, the Court emphasized that the calculations, although “primarily useful for computerized [applications],” could still “be made [using a] pencil and paper.” *Id.*

The second theme in the precedents is that claims directed to long-standing, widespread basic practices are too abstract to patent. The claim in *Alice* was drawn to using a computer as a neutral intermediary to reduce the risk of effecting a settlement. *Alice*, 134 S. Ct. at 2357. Because intermediated settlement is a widespread and long-standing practice in stock and

commodity exchanges (among other institutions), the Court found that the claim, even though long and complex, was directed to “an ‘abstract idea’ beyond the scope of § 101.” *Alice*, 134 S. Ct. at 2356. Given its focus on a fundamental practice, the claim in *Alice* was like the claim in *Bilski v. Kappos*, 130 S. Ct. 3218 (2010), which was lengthy but ultimately directed to using a computer to hedge against the risk of price fluctuations. The concept of hedging is “long prevalent in our system of commerce and taught in any introductory finance class” and was therefore a patent-ineligible “abstract idea, just like the algorithms at issue in *Benson* and *Flook*.” *Bilski*, 130 S. Ct. at 3222.

When these principles are applied to the claims of the PR patents-in-suit in the sections below, it becomes apparent that the claims of the PR patents-in-suit are directed to unpatentable abstract ideas.

B. The Relevant Patents Are Directed to Unpatentable Abstract Ideas

1. Independent Claims 1, 6 and 7 of the '226 Patent Cover Human Performable Mental Processes

As with the Supreme Court and Federal Circuit cases cited above, the claims of the '226 Patent are directed to concepts that could be performed in the mind or with pen and paper. (Ex. E; Thomas Decl. ¶ 98.) Claims 1, 6 and 7 simply require using a computer for 1) identifying and counting indirect links between documents in a citation database and 2) applying a probit (or logit) regression model to calculate the probability that a direct citation link exist between two documents. In particular the claims require

assigning a first generation relatedness score to said two or more input documents, said first generation relatedness score being calculated by a computer at least in part by counting a number of shared citational relationships occurring between said two or more input document said first generation relatedness score being statistically calculated by said computer to estimate an event probability that said at least two or more of said input documents are citationally related to one another

(’226 Patent, col. 42, ln. 66 to col. 43, ln. 9.) The specification of the ’226 Patent explains that:

a powerfully predictive probit or logit regression model can be constructed using the first generation citational relationship as the dependent variable (criterion variable sought to be predicted) and the second and higher generation citational relationships as independent variables (predictor variables). A suitably constructed regression model can then be optimized to calculate the event probability $p(R)$ that a first-generation citational relationship exists between any two documents of interest by examining the number and type of citational relationship that may exist at the second generation and higher.

(’226 Patent, col. 21 lns. 34-44.) Basically, the relevance system operates by identifying and counting indirect links between documents in a citation network. The extent of these links is then used to determine the probability of there being a direct citation link between subject documents using basic statistical tools such as regression models. The more indirect citation links between the subject documents, the higher the probability of a direct citation link existing between them. In essence, the claims cover the computer implementation of collecting bibliometric data and applying a fundamental statistical tool to determine a probability.

An individual could, with pen and paper, identify and count the number of links between documents with citations and apply a regression analysis to the links between the documents. The claims simply reflect the use of a computer to do what individuals could do in their heads or on paper. (Ex. E; Thomas Decl. ¶ 98.)

2. Independent Claims 1 and 13 of the ’701 Patent, Claims 1, 6 and 11 of the ’560 Patent; and Claims 1 and 13 of the ’996 Patent Cover Human Performable Mental Processes

The ’701 Patent, ’560 Patent, ’996 Patent and ’226 Patents are related and each share the same written description. As with the ’226 Patent, the ’701 Patent, ’560 Patent and ’996 Patent are directed to concepts that could be performed in the mind or with pen and paper. In particular, claims 1 and 13 of the ’701 Patent require 1) identifying and counting indirect links between documents in a citation database and 2) applying a probability function to determine the

probability that a first document cites to a second document. Similarly, claims 1, 6 and 11 of the '560 Patent are directed to 1) identifying and counting indirect links between documents in a citation database and 2) calculating a probability that a first-generation citation relationship exists. Likewise, claims 1 and 13 of the '996 Patent are drawn to a process and require 1) identifying and counting direct and indirect links between documents that are citationally related and 2) performing a statistical analysis to determine the probability that a direct link between documents exists.

The concepts described and claimed in each of the '701 Patent, '560 Patent and '996 Patent are substantially similar to the concepts in the '226 Patent and likewise could be performed in the mind or with pen and paper. (Ex. E; Thomas Decl. ¶ 98.)

3. The Claims of the Relevance Patents Cover Fundamental Practices

In addition to claiming concepts that can be performed in the mind or with pen and paper, the Relevance Patents are clearly drawn to the use of widespread, long-standing and well-known standard practices of statistical modeling and citational relatedness. Counting links between documents in a citational database is an old concept and so fundamental as to be the very definition of citational relatedness.¹ Moreover, the application of statistical algorithms and regression analysis to data in order to determine probabilities is also an old concept and a fundamental building block of data analysis.²

¹ There are two well-established abstract concepts that underpin most citation analysis. The first is that two documents connected by a citation link (whether direct or indirect) are related in some way. The second is that the citing document in the linked pair has been influenced to some degree by the cited document. From these basic concepts, one can apply a wide array of statistical analysis to quantify relatedness. (Ex. E; Thomas Decl. ¶¶ 17–29.)

² Multivariate statistical tools, like the ones claimed in the relevance patents, are used to model the relationship between multiple independent (“predictor”) variables and one or more dependent (“outcome”) variables. (Ex. E; Thomas Decl. ¶¶ 45–46.)

The claims in the Relevance Patents are directed to computer implementation of abstract concepts that use fundamental statistical tools of the industry. They simply require a computer to count and identify links between documents and then apply a well-known statistical tool to the data to determine the probability that one document cites to another. (Ex. E; Thomas Decl. ¶¶ 88–91, 96.) The Court has held these types of claims fundamentally abstract. *See Bilski*, 130 S. Ct. at 3231 (noting that hedging was “a fundamental economic practice long prevalent in our commerce system”); *Mayo*, 132 S. Ct. 1289, 1297 (2012) (where the Court invalidated claims setting forth “relationships between concentrations of certain metabolites in the blood and the likelihood that a dosage of thiopurine drug will prove ineffective or cause harm”); *Alice*, 134 S. Ct. 2347, 2359 (2014) (invalidating a patent directed to the age-old business method of mitigating settlement risk by using a third-party intermediary). Like the claims in these patents that relied on fundamental practices, the claims of the Relevance Patent are also drawn to a fundamental practice, namely calculating the probability that a direct citation link exists between documents by simply using a computer to apply fundamental and well-known statistical and bibliographic principles. (Ex. E; Thomas Decl. ¶¶ 88–91, 96.)

4. The PR Relevance Patent Claims Have No Transformative Elements

In order to survive Section 101, claims directed to abstract ideas must include elements sufficient to “transform the claimed abstract idea into a patent-eligible invention.” *Alice*, 134 S. Ct. at 2357. Reciting a general purpose computer will not suffice. *Id.* at 2358. Nor will a complex or lengthy specification. *Id.* at 2360. The claim must incorporate the abstract idea into an unconventional, technological improvement in the “physical realm.” *buySAFE v. Google*, 765 F.3d 1350, 1355 (Fed. Cir. 2014); *Alice*, 134 S. Ct. at 2357. The claims of the Relevance Patents do not include elements sufficient to transform the abstract idea into a patent-eligible invention and therefore fail the second part of the *Alice* framework.

The *Alice* framework requires, as part of the second step, “a search for an ‘inventive concept’—i.e., an element or combination of elements that is sufficient to ensure that the patent in practice amount to significantly more than a patent upon the ineligible concept itself.” *Alice*, 134 S. Ct. at 2357 (internal quotation marks omitted). The question becomes: Do the claims “do more than simply instruct the practitioner to implement the abstract idea”—here, determining probabilities of relatedness—“on a generic computer.” *Id.* In this case, as in *Alice*, the answer is no.

All of the claims of the Relevance Patents require the use of a computer for identifying, calculating, retrieving and displaying. However, “merely requiring generic computer implementation fails to transform [an] abstract idea into a patent eligible invention.” *Alice*, 134 S. Ct. at 2352. If the process can be carried out in “existing computers long in use” or if the references to particular computer functions are merely conventional, no inventive transformation occurs. *Id.* at 2357, 2360 (noting that “communication controller” and “data storage unit” are generic computing functions); *CyberSource*, 654 F.3d at 1373–74 (“computer readable medium” and “program instructions” are generic and non transformative).

Courts applying *Alice* have found that elements involving functions such as calculations, data retrieval, information display and data manipulation or storage do not sufficiently transform the claim to survive the second part of the *Alice* framework. See, e.g., *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, 758 F.3d 1344, 1351 (Fed. Cir. 2014) (process that uses “mathematical algorithms to manipulate existing information to generate additional information is not patent eligible”); *Data Distribution Techs. v. Brer Affiliates*, Case No. 12-4878 (JBS/KMW), 2014 WL 4162765, at *12 (D.N.J. Aug. 19, 2014) (“[A] modern computer takes the place of a more humble technology, the ledger: though the tool has changed, the activity is

the same.”); *DietGoal*, 2014 WL 3582914, at *14 (“The addition of a computer to perform calculations, retrieve data, and visually display images is nothing more than ‘post-solution activity’ that cannot render the process patentable.”).

Even prior to *Alice*, the Supreme Court looked unfavorably on these types of methods. *Parker*, 98 S. Ct. at 2528 (“If a claim is directed essentially to a method of calculating, using a mathematical formula, even if the solution is for a specific purpose, the claimed method is non-statutory.”).

The Relevance Patents’ recitations of a computer and computer system do not save these claims from Section 101. The computer implementation performs nothing more than functions that any conventional computer routinely handles. For example, the computer in the claims of the ’226 Patent does nothing more than conventional computer functions including receiving information, accessing a stored computer accessible database and calculating. The computer recited in the ’560 Patent performs similar basic computer functions such as receiving, identifying, programmatically calculating and storing. The claims of the ’701 Patent recite computer functions including determining relationships between objects, analyzing relationships between objects, applying a probability transform function, calculating a probability based on statistical formula and providing input variables to a multivariate regression model. The claims of the ’996 Patent recite computer functions including receiving information, identifying information, and determining a probability based on statistical formulas. As the Court in *Alice* noted, “wholly generic computer implementation is not generally the sort of ‘additional feature’ that provides any ‘practical assurance’ that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.” *Alice*, 134 S. Ct. at 2352–53. Here, the Relevance Patents do nothing more than identify links between documents and then apply a well-known regression

analysis tool to the data to provide probabilities or a score regarding the likelihood of a direct relationship between documents. (Ex. E; Thomas Decl. ¶¶ 92–93, 102, 120.)

Additional elements found in the Relevance Patent dependent claims are equally unavailing. For example, in the '226 Patent, the step of outputting a score is nothing more than post-solution activities that do not alter the abstract nature of the claims. *See DietGoal*, 2014 WL 3582914, at *14. Dependent claims 2–5 and 8–14 in the '226 Patent do nothing more than describe basic functions of computers (a data repository pre-generated with data, limitations and variations on how the computer should sum or manipulate the data, and outputting information). The dependent claims of the '560 Patent provide some of the same basic functions described above as well as limitations that require calculations performed by the computer to be “statistical analysis” and “predictive analysis.” Similar noninventive features are added in the dependent claims and clauses in the '701 Patent and the '996 Patent.

Applying the two-step process required under *Alice*, the Relevance Patents are directed to an abstract idea (i.e., the application through a computer of fundamental biometrical and statistical tools to date) that is not eligible for patent protection under 35 U.S.C. § 101. Nothing in the claims transforms the claimed abstract idea into a patent-eligible invention. *Alice*, 135 S. Ct. at 2358.

5. The Machine-Or-Transformation Test Further Supports the Finding Under the Second Prong Required Under *Alice*

Although the Supreme Court has held that the machine-or-transformation test “is not the sole test governing § 101 analyses,” *Bilski*, 130 S. Ct. at 3227, “that test can provide a ‘useful clue’ in the second step of the *Alice* framework.” *Ultramercial, Inc. v. Hulu*, 772 F.3d 709, 716 (Fed. Cir. 2014). Thus, under the machine-or-transformation test, a process may be patent eligible if “(1) it is tied to a particular machine or apparatus, or (2) it transforms a particular

article into a different state or thing.” *In re Bilski*, 545 F.3d 943, 954 (Fed. Cir. 2008) (*en banc*), *aff’d on other grounds*, *Bilski*, 130 S. Ct. 3218.

Application of the machine-or-transformation test does not save the patent eligibility of the Relevance Patents. The claims of the Relevance Patents are not tied to any particular novel machine or apparatus, only a general-purpose computer. In this case,³ the claims of the Relevance Patents do not alter the efficiency of the computer, rather they simply require the computer to perform conventional steps on data gathered by the computer. As noted above, adding a computer to otherwise conventional steps does not make an invention patent-eligible. *Alice*, 134 S.Ct at 2357. Similarly, the manipulation of data cannot satisfy the transformation prong as data are not physical objects or substances, and they are not representative of physical objects or substances. *Bilski*, 545 F.3d at 963. Application of the process claimed in the Relevance Patents does not transform any article to a different state or thing, it simply manipulates data or applies mathematical formulas to the data. Consequently, the claims of the Relevance Patents are not directed to patent-eligible subject matter.

C. The Ratings Patents Are Direct to Unpatentable Abstract Ideas

The Ratings Patents (the ’992 Patent and the ’511 Patent) are directed to a method for rating patents by using a computer to extract data from them and applying a regression model to the data. Essentially, the Ratings Patents’ purpose is the computer implementation of a standard statistical technique. Independent claim 1 of the ’992 Patent is representative of the claimed process:

1. A computer-automated method for rating or ranking patents or other intangible assets comprising:

³ The “Ratings Patents,” the “Valuation Patent,” and the “Technology Obsolescence Patent” all suffer from the same deficiencies under the application of the “machine-or-transformation” test.

selecting a first population of patents having a first quality or characteristic;

selecting a second population of patents having a second quality or characteristic that is different from or assumed to be different from said first quality or characteristic;

providing a computer-accessible database of selected patent metrics representative of or describing particular corresponding characteristics of each said patents in said first and second patent populations;

constructing a computer regression model based on said selected patent metrics, said regression model being operable to input said selected patent metrics for each said patent in said first and second patent populations and to output a corresponding rating or ranking that is generally predictive of the presence or absence of said first and/or second quality in said first and second patent populations according to a determined statistical accuracy; and

using said regression model to rate or rank one or more patents in a third patent population by inputting into said regression model selected patent metrics representative of or describing corresponding characteristics of said one or more patents in said third population to be rated or ranked and causing said regression model to output a corresponding rating or ranking based thereon.

The patent simply provides a ranking based on the number of metrics extracted and the application of a standard statistical model. (Ex. E; Thomas Decl. ¶¶ 128–34.) As the specification notes, the metrics (i.e., data) are simply pulled from the patent documents by the computer:

Direct patent metrics measure or report those characteristics of a patent that are revealed by the patent itself, including its basic disclosure, drawings and claims, as well as the PTO record or file history relating to the patent.

(’992 Patent col. 11 lns. 44-47.)

The examination of relationships between metrics and outcomes, as is performed by the Ratings Patents, is a core tool for the use of regression analysis to relate metrics to outcomes and is also a “fundamental practice” in statistics and data analysis. (Ex. E; Thomas Decl. ¶¶ 133–34, 137, 139–41, 149.) Thus, the Ratings Patents are simply claiming an abstract idea.

1. The Ratings Patents Are Directed to Human Performable Mental Processes

Like the Relevance Patents, the Ratings Patents are directed to human performable mental processes that could be performed in the mind or on pen and paper. (Ex. E; Thomas Decl. ¶ 141.) In particular, the Patent Ratings claims are designed to provide a ranking of patents based on a number of metrics extracted from these patents. A regression analysis is then applied to the extracted metrics to calculate the probability of certain future events occurring in connection with the patents. (Ex. E; Thomas Decl. ¶¶ 128–34.) The patent specification supports this when it notes that “in its simplest form the present invention provides a statistical patent rating method and system for rating or ranking patents based on certain selected patent characteristics or ‘patent metrics.’” (Ex. B; ’511 Patent, col. 11 lns. 21-24) As a result, the method of extracting data from a patent and applying a regression analysis to the extracted data could be performed by a human. (Ex. E; Thomas Decl. ¶ 141.)

2. The Claims of the Ratings Patents Cover Fundamental Practices

The Ratings Patents are clearly drawn to the use of widespread, long-standing and well known standard practices of statistical modeling and gathering of data from databases. In essence, the Ratings Patents are directed to two fundamental concepts: 1) the use of metrics as inputs in the rating system and 2) the use of statistical models to relate metrics to selected events. (Ex. E; Thomas Decl. ¶¶ 128, 131–34.) Each of these elements is old and well known in the industry. *Id.* In particular, and as noted above, logit and probit regression are standard statistical tools that are in widespread usage and can be found in any basic statistics textbook. (Ex. E; Thomas Decl. ¶¶ 133–34, 149.) Standard multiple regression is even more widely used, and has an even longer history than either probit or logit regression, dating back to the early nineteenth century. (Ex. E; Thomas Decl. ¶¶ 133–34, 141, 149.) Regardless of which regression analysis is

used, they both represent basic statistical tools in widespread use. In addition, extracting data from a database is one of the fundamental processes conducted by a computer.

Like the claims in *Mayo*, *Bilski* and *Alice* described above that relied on fundamental practices, the claims of the Ratings Patents are also drawn to the fundamental practice of extracting data or metrics from a database of patents and using statistical analysis to relate the metrics to patent events. Indeed, the use of regression to relate metrics to outcomes is a “fundamental procedure” in statistics and data analysis. (Ex. E; Thomas Decl. ¶¶ 139, 149.) As a result, the Ratings Patents claims are directed to an abstract idea. (Ex. E; Thomas Decl. ¶ 149.)

3. The Ratings Patents Claims Have No Transformative Elements

As noted above, in order to survive Section 101, claims directed to abstract ideas must include elements sufficient to “transform the claimed abstract idea into a patent-eligible invention.” *Alice*, 134 S. Ct. at 2357. The claims of the Ratings Patents do not include elements sufficient to transform the abstract idea into a patent-eligible invention and therefore fail the second part of the *Alice* framework.

All of the claims of the Ratings Patents require the use of a computer for selecting data, providing a database, using or applying a regression model, and outputting the results. However, “merely requiring generic computer implementation fails to transform [an] abstract idea into a patent eligible invention.” *Alice*, 134 S. Ct. at 2352. If the process can be carried out in “existing computers long in use” or if the references to particular computer functions are merely conventional, no inventive transformation occurs. *Id.* at 2357, 2360 (noting that “communication controller” and “data storage unit” were generic computing functions); *CyberSource*, 654 F.3d at 1373–74 (explaining that “computer readable medium” and “program instructions” were generic and non transformative).

Courts applying *Alice* have found that elements involving functions such as calculations, data retrieval, information display and data manipulation or storage do not sufficiently transform the claim to survive the second part of the *Alice* framework. See *Digitech Image Techs., LLC v. Elecs. for Imaging, Inc.*, No. 2013-1600, 2014 WL 3377201, at *5 (Fed. Cir. July 11, 2014) (process that uses “mathematical algorithms to manipulate existing information to generate additional information is not patent eligible”); *Data Distribution Technologies*, 2014 WL 4162765, at *12 (D.N.J. Aug. 19, 2014) (“[A] modern computer takes the place of a more humble technology, the ledger: though the tool has changed, the activity is the same.”); *DietGoal*, 2014 WL 3582914, at *14 (“The addition of a computer to perform calculations, retrieve data, and visually display images is nothing more than ‘post-solution activity’ that cannot render the process patentable.”).

The Ratings Patents’ recitations of a computer and computer system do not save these claims from being ineligible under Section 101. The computer implementation is nothing more than a recitation of basic functions that any conventional computer routinely handles (e.g., obtaining data, using a computer to access data files, inputting data, storing the output). (See ’992 Patent, claim 33.) As the Supreme Court noted in *Alice*, “wholly generic computer implementation is not generally the sort of “additional feature” that provides any “practical assurance that the process is more than a drafting effort designed to monopolize the [abstract idea] itself.” *Alice*, 134 S. Ct. at 2350–51. Here, the Ratings Patents do nothing more than use a computer to extract data from a database relating to patents and then apply a well-known regression analysis tool to the data to predict outcomes. The claims do no more than claim fundamental statistical tools implemented by a general-purpose computer.

D. The Valuation Patent Is Directed to Unpatentable Abstract Ideas

The Valuation Patent (the '476 Patent) is directed to a method for valuing patents using patent metrics. The valuation is based on payment or nonpayment of maintenance fees to the Patent Office. As noted with respect to the Ratings Patents, the idea of relating patent metrics (in this case the payment of maintenance fees) to an outcome (in this case a calculated value) is old and well known in the field. (Ex. E; Thomas Decl. ¶ 154.) Essentially, the claims of the '476 Patent are directed to a computer-implemented application of a fundamental statistical tool (i.e., regression analysis) to a collection of data. Under *Alice*, this qualifies as being directed to an abstract idea. More importantly, the claimed process is one that can be performed in the mind or with pen and paper. (Ex. E; Thomas Decl. ¶ 156.)

Turning to the second step of *Alice* (i.e., is there an inventive concept in the claim?), the answer is clearly no. Although the claims of the '476 Patent do discuss the generation of an exchange rate for patents from different jurisdictions, this step is merely a simple computer-implemented mathematical comparison of numerical values from two distinct groups. (Ex. E; Thomas Decl. ¶ 155.) Thus, the Valuation Patent does not include an inventive concept that transforms the claim from an abstract idea into something more.

The examination of relationships between metrics and outcomes, as done by the Valuation Patent, is a core tool of bibliometric research, and the use of regression analysis to relate metrics to outcomes is also a “fundamental practice” in statistics and data analysis. (Ex. E; Thomas Decl. ¶¶ 139, 149.) Thus, the Valuation Patent is simply claiming an abstract idea.

E. The Technology Obsolescence Patent Is Directed to an Unpatentable Abstract Idea

The Technology Obsolescence Patent (the '581 Patent) is directed to a method for predicting the future depreciation of technology claimed in a patent. The forecast is made based

on the pattern of forward citations. The method claimed, however, is nothing more than the computer implementation of curve estimation techniques that are basic fundamental tools in forecasting. In particular, the claims apply a lognormal model, one of the most widely used models in this industry, to predict depreciation. (Ex. E; Thomas Decl. ¶ 160.) The claims recite a computer that (1) selects data, (2) generates and applies a lognormal model to the data, (3) generates and applies an exponential decay function to the data and then (4) stores the result. (Ex. E; Thomas Decl. ¶¶ 160–61.) As a result, the claims are clearly directed toward an ineligible abstract idea. As there is no additional inventive step recited in the claims, the claims also fail the second step of *Alice*, and thereby qualify as a patent-ineligible abstract idea. (Ex. E; Thomas Decl. ¶ 161.)

Simply implementing this fundamental tool on a computer does not create any improved processing or computer technology. As noted above, implementing a method on a general-purpose computer is insufficient to make otherwise abstract ideas patentable. *Alice*, 134 S. Ct. at 2358.

CONCLUSION

For the reasons stated above, each of the Relevance Patents, Ratings Patents, Valuation Patent and Technology Obsolescence Patent is directed to an abstract idea. The claims simply recite the computer implementation of generic computer functions regarding data and the application of well-known fundamental statistical models to the data. Consequently, the patents-in-suit cover nonpatentable subject matter under 35 U.S.C. § 101.

Respectfully submitted,

OCEAN TOMO, LLC

By: /s/ Jeremy R. Heuer

One of Its Attorneys

Thomas P. Cimino
Robert S. Rigg
Jeremy R. Heuer
Vedder Price P.C.
222 North LaSalle Street
Chicago, Illinois 60601
T: +1 (312) 609 7500

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CERTIFICATE OF SERVICE

I, Jeremy R. Heuer, an attorney, hereby certify that on January 30, 2015, I caused to be electronically filed the foregoing **PLAINTIFF-COUNTER DEFENDANT'S MEMORANDUM IN SUPPORT OF ITS MOTION FOR SUMMARY JUDGMENT OF INVALIDITY UNDER 35 U.S.C. § 101** with the Clerk of the Court using the Court's Case Management/Electronic Case Files (CM/ECF) system, which will send notifications of such filing to the following counsel of record:

David C. Layden DLayden@jenner.com

/s/ Jeremy R. Heuer _____